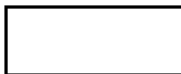
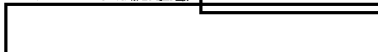


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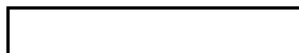
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MEMORANDUM FOR THE DIRECTOR OF CENTRAL INTELLIGENCE

SUBJECT: Soviet Knowledge of US Reconnaissance Satellite Programs

1. Statements by Soviet officials and articles in the Soviet press and publications reveal only such specific knowledge of the US reconnaissance programs as has been readily available from open sources in the US press and technical journals. Such information relates to the SAMOS and MIDAS in considerable detail and in lesser degree to the DISCOVERER series although the relationships between these three are clearly described. Specific details mentioned in US press sources have included the size of an object on the ground that can be identified from the photography, the method used in recovering the photographs, the organization for processing the photography as well as for incorporating the results in SAC target folders.

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State Dept. declassification & release instructions on file

DOS and NRO review(s) completed.

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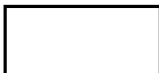
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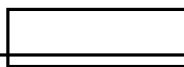
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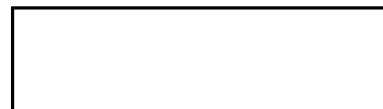
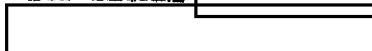


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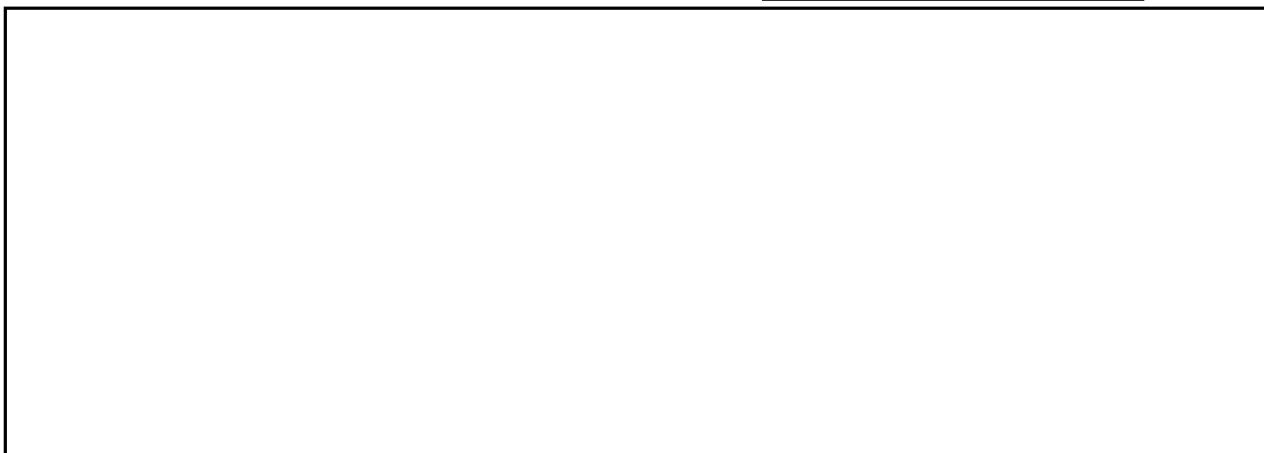
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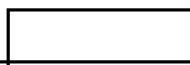
Information Revealed in Open Soviet Sources

8. A lengthy article by G. Zhukov titled "Space Espionage Plans and International Law" which appeared in the Soviet monthly journal, International Affairs, published in October 1960 includes specific details which have appeared in US open sources.

9. The following excerpts are pertinent quotes by G. Zhukov and other Soviet writers from US publications:

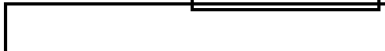
"The SAMOS system is scheduled to become operative in 1962. The plan is to put a number of these spy satellites into a polar orbit to keep the territory of the USSR and the other Socialist countries under constant surveillance."

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"The main purpose of the DISCOVERER program was to perfect the launching, orbiting, and retrieving of the sky-spy containers."

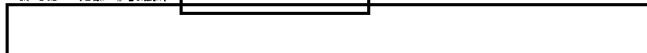
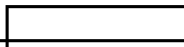
"SAMOS II launched on 31 January 1961. However, the satellite's equipment worked for only two weeks and its capsule with photographic equipment could not be returned to earth."

10. The Soviet publication, Aviation and Cosmonautics, for January 1962 has an article, "American Spies in Space". This article presents details on the firings, orbits, missions, and other details concerning SAMOS, MIDAS and TIROS.

Other Information Available from US Press Sources

11. Exhaustive details are available in Aviation Week and Space Technology relating to the manufacture, performance characteristics and construction details, including photography of components, of the ARGENA vehicle which launches SAMOS, MIDAS, and DISCOVERER. Missiles and Rockets reporting on the launching of SAMOS III stated that:

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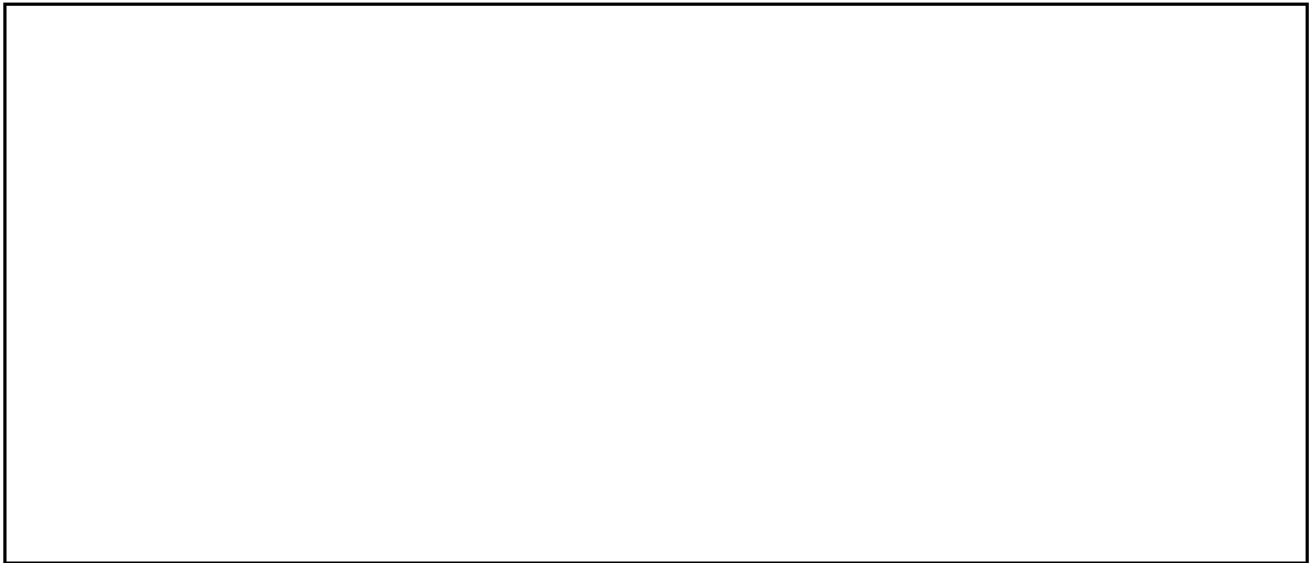


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Estimated Soviet Knowledge Based on State-of-the-Art

13. Soviet accomplishments in the field of optics, camera geometry, films and film processing are probably not equal to those of the US. They have not had the experience in building camera systems such as have been built and tested by the US and therefore may not have learned certain techniques now familiar to US technicians.

14. Soviet scientists apparently were impressed by the high quality of photography recovered from the U-2 in 1960. Statements by Soviet officials and scientists subsequent to this incident bear out the impression that there was surprise at the information being

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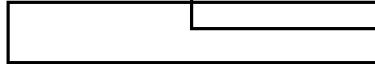
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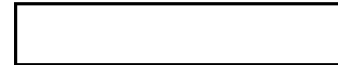


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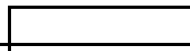
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collected. Extrapolating from this knowledge of US technology in 1960 Soviet scientists can readily calculate that when the US has a fully operational system in this field it will permit photographic resolution of objects 10 to 20 feet on a side.

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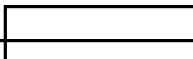
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"Available lenses and TV equipment will make possible photographs equivalent to what can be seen from an altitude of 100 feet."

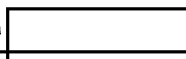
"Its functions will be to spot missile launching pads, airfields, industrial plants and any massive build-up of Communist military equipment."

"The SAMOS project is closely related to the development of military MIDAS satellite ....The main purpose of the latter is to keep the earth under observation with instruments sensitive to rays emitted by hot gases formed during the launching of rockets."

"SAMOS satellites detect missile bases, MIDAS will register the launching of missiles."

"Closely related to SAMOS and MIDAS is the program for employing DISCOVERER satellites for intelligence purposes. DISCOVERER satellites are intended to solve the problem of bringing containers with photographic intelligence back to earth."

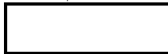
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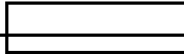
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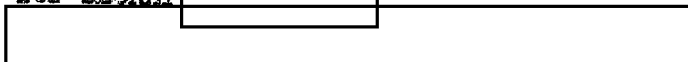
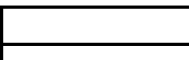
"Its polar orbit will carry it over the Soviet Union at frequent intervals. Ground stations will be able to turn its camera on by radio as the satellite crosses Russia or other points on the earth surface."

"Such a flood of photographs is expected from the camera carrying satellite that a photoanalysis unit at the Air Force test center at Sunnyvale, California is being enlarged by between 30 and 50 people. It will be on a three-shift working day to process photographs of Russia."

"At the same time a photo unit will be activated at Strategic Air Command Headquarters, Offutt Air Force Base, Nebraska, to undertake target-planning activities from the SAMOS photos for use by Strategic Air Command bomber and missile crews."

"A UPI story stated that the SAMOS satellite actually would be of greater espionage value than the MIDAS. The SAMOS, which sends televised pictures back to earth, can detect a missile being set up on the ground, even before a launch."

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